What is claimed is:

1. A setting construction of a shield case or a planar antenna on a circuit board, characterized in that

(a) an elastically deformable pin by a bending stress (hereinafter, called as elastically bending pin) is arranged to a peripheral end of the shield case made of metal or the planar antenna installed in a wireless device,

(b) a through hole is arranged to the circuit board or the circuit board and an outer casing, and

(c) the shield case or the planar antenna is electrically and/or mechanically connected to the circuit board or the circuit board and the outer casing by inserting the elastically bending pin into the through hole.

2. The setting construction of the shield case or the planar antenna on the circuit board according to claim 1, wherein, in the connection structure between the planar antenna installed in the wireless device and the circuit board,

(a) the planar antenna comprises: a planar antenna element; a power supply strip and a short circuit strip formed by bending two thin strips projected from one side end of the antenna element in a substantially vertical direction with respect to a plane of the planar antenna element; and a power supply spring pin and a short circuit spring pin that are elastically deformable by the bending stress, which are formed at tip portions of the power supply strip and the short circuit strip, and

(b) the circuit board comprises: a power supply circuit and a short circuit; and a power hole and a short circuit hole each having an inner wall to which a power supply conductive layer and a short circuit conductive layer connected to the power supply circuit and the short circuit are arranged,

wherein the power supply spring pin and the short circuit spring pin of the planar antenna are detachably inserted into the power supply hole and the short circuit hole of the circuit board in a bending deformable manner so as to connect mechanically and electrically the planar antenna and the circuit board.

3. The connection structure between the planar antenna and the circuit board according to claim 2, wherein,

(a) the planar antenna comprises a plurality of connection spring pins formed by bending a plurality of thin strips projected from a side end of the planar

antenna element in a substantially vertical direction with respect to a plane of the planar antenna element at a plurality of portions of the side end of the planar antenna element other than the portions at which the power supply strip and the short circuit strip are formed, and

(b) the circuit board comprises a plurality of connection holes formed at the portions corresponding to the plural connection spring pins where the power supply circuit, the short circuit, the power supply conductive layer and the short circuit conductive layer are not formed,

wherein the plural connection spring pins of the planar antenna are inserted into the plural connection holes of the circuit board in a bending deformable manner so as to connect mechanically the planar antenna and the circuit board.

4. The connection structure of the construction parts on the circuit board according to claim 1, wherein, in the connection structure between the planar antenna installed in the wireless device and the circuit board,

(a) the planar antenna comprises: a planar antenna element; a power supply strip and a short circuit strip formed by bending two thin strips projected from one side end of the antenna element in a substantially vertical direction with respect to a plane of the planar antenna element; a power supply pressure-connection terminal and a short circuit pressure-connection terminal that are elastically deformable by the bending stress, which are formed at tip portions of the power supply strip and the short circuit strip; and a plurality of connection spring pins formed by bending a plurality of thin strips projected from a side end of the planar antenna element in a substantially vertical direction with respect to a plane of the planar antenna element at a plurality of portions of the side end of the planar antenna element other than the portions at which the power supply strip and the short circuit strip are formed, and

(b) the circuit board comprises: a power supply circuit and a short circuit; a power supply conductive pad and a short circuit conductive pad connected to the power supply circuit and the short circuit; and a plurality of connection holes formed at the portions where the power supply circuit, the short circuit, the power supply conductive pad and the short circuit conductive pad are not formed,

wherein the plural connection spring pins of the planar antenna are detachably inserted into the plural connection holes of the circuit board in a bending deformable manner so as to connect mechanically the planar antenna and the circuit board, and, wherein the power supply pressure-connection terminal and the short circuit pressure-connection terminal of the planar antenna are pressed to the power supply conductive pad and the short circuit conductive pad of the circuit board in a bending deformable manner so as to connect electrically the planar antenna and the circuit board.

5. The connection structure between the planar antenna and the circuit board according to claim 1 or 3, wherein a film made of electrically insulated material is laminated on a surface of the planar antenna element opposed to the circuit board and/or a surface of the planar antenna on the other side of the surface opposed to the circuit board.

6. The connection structure between the planar antenna and the circuit board according to claim 5, wherein the film made of electrically insulated material is laminated on a surface of the planar antenna element opposed at least to the circuit board and a part of a housing or a support member for this purpose is interposed between the planar antenna and the circuit board.

7. The connection structure between the planar antenna and the circuit board according to claim 5, wherein a thickness of the film is not less than 1 μm and not larger than 200 μm.

8. The connection structure between the planar antenna and the circuit board according to claim 1 or 3, wherein the planar antenna element is made of brass, phosphorus bronze, nickel copper, titanium copper, Corson alloy or beryllium copper.

9. The connection structure of the construction parts on the circuit board according to claim 1, wherein, in the connection structure between the planar antenna installed in the wireless device and the circuit board,

(a) the planar antenna comprises: a planar antenna element; a power supply strip and a short circuit strip formed by bending two thin strips projected from one side end of the antenna element in a substantially vertical direction with respect to a plane of the planar antenna element; a power supply terminal and a short circuit terminal that are elastically deformable by the bending stress,

which are formed at tip portions of the power supply strip and the short circuit strip; and a plurality of connection spring pins formed by bending a plurality of strips projected from a side end of the planar antenna element in the reverse direction with respect to the direction to which the power supply strip and the short circuit strip are bended, and

(b) the circuit board comprises: a power supply circuit and a short circuit; and a power supply conductive layer and a short circuit conductive layer connected to the power supply circuit and the short circuit,

wherein the plural connection spring pins of the planar antenna are detachably inserted into a plurality of connection holes formed on a surface of a housing arranged in the reverse side with respect to the side opposed to the circuit board in a bending deformable manner so as to connect mechanically the planar antenna and the housing, and, wherein the power supply terminal and the short circuit terminal of the planar antenna are electrically connected to the power supply conductive layer and the short circuit conductive layer formed on the circuit board.

10. The connection structure between the planar antenna and the circuit board according to claim 9, wherein the power supply terminal and the short circuit terminal of the planar antenna are constructed respectively as a power supply pressure-connection terminal and a short circuit pressure-connection terminal that are deformable by a bending stress, and, the power supply conductive layer of the circuit board are constructed respectively as a power supply conductive pad and a short circuit conductive pad, wherein the power supply pressure-connection terminal and the short circuit pressure-connection terminal are pressed to the power supply conductive pad and the short circuit conductive pad so as to connect electrically them.

11. The connection structure between the planar antenna and the circuit board according to claim 9, wherein

(a) the power supply terminal and the short circuit terminal of the planar antenna are constructed respectively as a power supply spring pin and a short circuit spring pin that are deformable by a bending stress,

(b) a power supply connection hole and a short circuit connection hole are arranged respectively to the circuit board at portions corresponding to the

power supply spring pin and the short circuit spring pin, and

(c) the power supply conductive layer and the short circuit conductive layer are formed to the inner walls of the power supply connection hole and the short circuit connection hole,

wherein the power supply spring pin and the short circuit spring pin of the planar antenna are inserted respectively into the power supply connection hole and the short circuit connection hole formed on the circuit board in a bending deformable manner so as to connect mechanically and electrically the planar antenna and the circuit board.

12. The connection structure between the planar antenna and the circuit board according to claim 9, wherein a film made of electrically insulated material is laminated on a surface of the planar antenna element opposed to the circuit board and/or a surface of the planar antenna on the other side of the surface opposed to the circuit board.

13. The connection structure between the planar antenna and the circuit board according to claim 12, wherein the film made of electrically insulated material is laminated on a surface of the planar antenna element opposed at least to the circuit board and a part of a housing or a support member for this purpose is interposed between the planar antenna and the circuit board.

14. The connection structure between the planar antenna and the circuit board according to claim 12, wherein a thickness of the film is not less than 1 μm and not larger than 200 μm.

15. The connection structure between the planar antenna and the circuit board according to claim 9, wherein the planar antenna element is made of brass, phosphorus bronze, nickel copper, titanium copper, Corson alloy or beryllium copper.

16. The setting construction of the shield case or the planar antenna on the circuit board according to claim 1, wherein, in the setting construction of the shield case on the circuit board,

(a) a plurality of anchor pins having an elastic property are formed integrally to a lower end of the shield case made of metal,

(b) the anchor pins are inserted into through holes arranged to the circuit board, and, a side portion of the anchor pin and a side portion of the through hole are

pressed with each other, and

(c) a ground wire arranged on the circuit board at a portion corresponding to the lower end of the shield case is electrically connected to at least part of the lower end of the shield case or the anchor pin.

17. The setting construction of the shield case on the circuit board according to claim 16, wherein the anchor pin is projected from the through hole at a rear side of the circuit board, and, a projected portion of the anchor pin is protruded from the through hole toward a side direction.

18. The setting construction of the shield case on the circuit board according to claim 16, wherein a distance between the anchor pins having an elastic property is designed to deviate from a distance between the corresponding through holes, so that a side portion of the anchor pin presses elastically a side portion of the through hole.

19. The setting construction of the shield case on the circuit board according to claim 16, wherein the anchor pin is divided into plural pieces in a longitudinal direction, and a diameter of the anchor pin is designed to be little larger than that of the through hole in a normal state, so that a side portion of the anchor pin presses elastically to side portion of the through hole.

20. The setting construction of the shield case on the circuit board according to claim 16, wherein small holes for ventilating are not formed to the shield case.

21. The setting construction of the shield case on the circuit board according to claim 16, wherein a thin plate spring made of metal for pressing both of the shield case and the circuit board is arranged between the lower end of the shield case and the ground wire.

22. The setting construction of the shield case on the circuit board according to claim 16, wherein a thin plate spring made of metal is arranged in a slant downward direction from a side portion of the shield case, and the thin plate spring presses an upper surface of the circuit board by means of an elastic force.

23. The setting construction of the shield case on the circuit board according to claim 22, wherein the ground wire is arranged at a region of the circuit board that is pressed by the thin plate spring.

24. The setting construction of the shield case on the circuit board

according to claim 22, wherein the thin plate spring is arranged alternately to an inner side and an outer side of the shield case, and an overall surface of the shield case is surrounded by the thin plate spring at one of the inner surface and the outer surface.

25. The setting construction of the shield case on the circuit board according to claim 16, wherein the lower end of the shield case and the ground wire of the circuit board is connected by a conductive paste.

26. The setting construction of the shield case on the circuit board according to claim 16, wherein the shield case is made of brass, phosphorus bronze, nickel copper, titanium copper, Corson alloy or beryllium copper.

27. The setting construction of the shield case or the planar antenna on the circuit board according to claim 1, wherein, in the setting construction of the shield case on the circuit board with an outer casing,

(a) a plurality of lock pins are formed integrally to an upper side of the shield case made of metal,

(b) the lock pin is inserted into a through hole arranged to an upper portion of the outer casing,

(c) a side portion of the lock pin presses elastically a side portion of the through hole with each other, and

(d) on the circuit board, the ground wire arranged to a portion corresponding to the lower end of the shield case is connected elastically to at least a part of the lower end of the shield case.

28. The setting construction of the shield case on the circuit board with the outer casing according to claim 27, wherein a diameter of the through hole is designed to be varied in two-step manner such that a diameter at an upper through hole is larger than that at a lower through hole in a longitudinal direction, and an upper portion of the lock pin is protruded toward a side direction with respect to the lower through hole.

29. The setting construction of the shield case on the circuit board with the outer casing according to claim 27, wherein a distance between the lock pins having an elastic property is designed to deviate from a distance between the corresponding through holes, so that a side portion of the lock pin presses elastically a side portion of the through hole.

30. The setting construction of the shield case on the circuit board with the outer casing according to claim 27, wherein the lock pin is divided into plural pieces in a longitudinal direction, and a diameter of the lock pin is designed to be little larger than that of the through hole in a normal state, so that a side portion of the lock pin presses elastically a side portion of the through hole.

31. The setting construction of the shield case on the circuit board with the outer casing according to claim 27, wherein small holes for ventilating are not formed to the shield case.

32. The setting construction of the shield case on the circuit board with the outer casing according to claim 27, wherein a thin plate spring made of metal for pressing both of the shield case and the circuit board is arranged between the lower end of the shield case and the ground wire.

33. The setting construction of the shield case on the circuit board with the outer casing according to claim 27, wherein a thin plate spring made of metal is arranged in a slant downward direction from a side portion of the shield case, and the thin plate spring presses an upper surface of the circuit board by means of an elastic force.

34. The setting construction of the shield case on the circuit board with the outer casing according to claim 33, wherein the ground wire is arranged at a region of the circuit board that is pressed by the thin plate spring.

35. The setting construction of the shield case on the circuit board with the outer casing according to claim 33, wherein the thin plate spring is arranged alternately to an inner side and an outer side of the shield case, and an overall surface of the shield case is surrounded by the thin plate spring at one of the inner surface and the outer surface.

36. The setting construction of the shield case on the circuit board with the outer casing according to claim 27, wherein a thin plate spring made of metal for pressing both of the shield case and the outer casing is arranged between an upper end of the shield case and the outer casing.

37. The setting construction of the shield case on the circuit board with the outer casing according to claim 27, wherein the lower end of the shield case and the ground wire of the circuit board is connected by a conductive paste.

38. The setting construction of the shield case on the circuit board with

the outer casing according to claim 27, wherein the shield case is made of brass, phosphorus bronze, nickel copper, titanium copper, Corson alloy or beryllium copper.